

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Improving Public Safety Communications in)	
the 800 MHz Band)	
)	
Consolidating the 900 MHz Industrial/Land)	WT Docket No. 02-55
Transportation and Business Pool Channels)	
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COMMENTS OF THE CITY OF NEW YORK

The City of New York ("City"), hereby submits these comments in response to the Notice of Proposed Rulemaking ("NPRM") released by the Federal Communications Commission ("FCC") in the above captioned proceeding.

I. OVERVIEW

The City of New York commends the Federal Communication Commission's commitment to ensuring the availability of adequate, interference-free spectrum in the 800 MHz public safety frequency band, as evidenced by this NPRM and related policy statements.¹ The City also appreciates the efforts by Nextel Communications ("Nextel"),

¹ See *Improving Public Safety Communications in the 800 MHz Band and Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels*, WT Docket No. 02-55, FCC No. 02-81, Notice of Proposed Rulemaking (rel. Mar. 14, 2002) (*Improving Public Safety in 800 MHz Notice*); See Separate Statements of Commissioners Abernathy, Copps and Martin appended, *Improving Public Safety in 800 MHz Notice*.

the National Association of Manufacturers ("NAM"), the FCC and other interested parties, in developing incisive proposals to help focus the dialogue on remedying 800 MHz public safety band problems.²

New York City is vitally interested in resolution of the issues raised in the NPRM. The 800 MHz public safety band enables the City to provide coordinated first response to, and on-site management of, emergencies, disasters and crises of all types. At the same time, the City recognizes the difficulties inherent in arriving at a solution that satisfies the many, often conflicting, stakeholder interests, while at the same time promoting public safety. In responding to this NPRM, therefore, the City has a compelling interest in setting forth three guiding principles it believes must be a part of any reform plan:

1. Allocation of additional 800 MHz public safety spectrum³;
2. Resolution of public safety communication interference through the provision of contiguous 800 MHz public safety spectrum with guard bands; and
3. Implementation of the above public safety needs without imposing unfunded costs on public safety users or disrupting public safety communications.

² *Promoting Public Safety Communications: Realigning the 800 MHz Land Mobile Radio Band to Rectify Commercial Mobile Radio-Public Safety Interference and Allocate Additional Spectrum to Meet Critical Public Safety Needs (Nextel Proposal)*, Nov. 21, 2001; Letter of December 21, 2001, to Michael Powell, Chairman, Federal Communications Commission, from Jerry Jasinowski, President, National Association of Manufacturers and Clyde Morrow, Sr., President, MRFAC, Inc. (*NAM Proposal*); and *Improving Public Safety in 800 MHz Notice*, para. 26.

³ The City believes there should be, at minimum, an additional 4 MHz of non-interleaved spectrum, not including current NPSPAC frequencies.

From New York City's standpoint, the Nextel Proposal broadly satisfies these first two needs.⁴ The proposal would result in approximately 10 MHz of new or reconfigured radio spectrum for public safety use, and address interference by clustering public safety licensees in contiguous spectrum at 806-824 and 851-861 MHz. Nextel proposes to partially defray public safety relocation costs through a \$500 million financial commitment. Nonetheless, as observed by the Association of Public-Safety Communications Officials ("APCO") and six other public safety agencies, the proposal would still "impose substantial undetermined costs on public licensees."⁵ To reiterate, the City of New York's eventual endorsement of any proposal is contingent on the identification of appropriate "external" sources to fully fund relocation and all other costs directly associated with implementing such plan.

II. ALLOCATING ADDITIONAL 800 MHz PUBLIC SAFETY SPECTRUM

New York City's 800 MHz public safety resources are stretched virtually to the limit. The City's Department of Information Technology and Telecommunications ("DoITT") is a principal user of the 800 MHz public safety band. Using a 15-channel trunked radio network, DoITT supports an interoperable system utilized on an every-day basis by approximately 40 agencies and, as necessary, in cooperation with federal and state authorities. Since its installation over 12 years ago, this system has enabled coordinated communications in emergencies including blizzards, gas main explosions, hazardous

⁴ The NAM Proposal, by contrast, provides virtually no additional spectrum for public safety, and requires nearly all public safety users to relocate to other portions of the 800 MHz band. Moreover, no consideration is given to funding the substantial costs associated with the proposed public safety relocation.

⁵ See Letter of November 21, 2001, to Michael Powell, Chairman, Federal Communications Commission, from Glen Nash, President, Association of Public-Safety Communications Officials-International, *et. al.* Still, the City concurs with APCO and the other public safety agencies that the "basic elements" of the Nextel Proposal "have the potential to substantially improve the quality and quantity of public safety communications." *See Id.*

materials incidents, plane crashes and terrorist attacks. The New York City Mayor's Office of Emergency Management ("OEM") is among the most critical users of this interoperable network. OEM's Agency Liaison Emergency Radio Trunk ("ALERT") sub-fleet channel is the modality by which the City coordinates first response activities.

With approximately 8,000 radios⁶ currently operating over 15 channels, this core public safety system considerably exceeds the FCC's recommended loading criteria of 100 radios per channel.⁷ Moreover, in the wake of September 11, the City has realized pressing new public safety communications needs. A "sampling" of these needs includes distributing radios to approximately 1,200 public schools, and 20 colleges and universities in the event of another crisis.⁸ The City has also distributed more than 100 new radios to hospitals in the Health and Hospitals Corporation and Greater New York Hospital systems, providing each with its own talk group and connectivity to OEM's ALERT channel. Moreover, to compensate for its loss of facilities at the World Trade Center, the City will distribute over 200 radios to the New York City Housing Authority.

The 800 MHz public safety frequencies utilized by New York City to support lifesaving data and telemetry communications by the New York City Fire Department ("FDNY") and the FDNY-based Emergency Medical Services ("EMS") are similarly strained. FDNY's Mobile Data Radio System provides wireless communication between mobile data terminals in FDNY vehicles and a host Computer Aided Dispatch ("CAD") system. Through the EMS Mobile Data Radio System, all EMS ambulances and field supervisory

⁶ Including approximately 1,600 radios distributed after the September 11 attack.

⁷ See Trunked Systems Loading, Construction and Authorization Requirements, 47 C.F.R. § 90.631 (2001).

⁸ Depending on the nature of the crisis, the radios could be used to coordinate the orderly evacuation of schools and/or to utilize the technical expertise of scholars at the City's institutions of higher learning.

vehicles are also equipped with mobile data terminals, which receive and display emergency job assignments and enable rapid, coordinated response in life or death situations.⁹ Finally, the FDNY/EMS Command trunked radio system is mainly used for ambulance dispatch and telemetry purposes. The primary users of the system are the EMS command field supervisors who utilize it to communicate with their respective divisions or battalions and the EMS dispatch center.¹⁰

III. RESOLVING PUBLIC SAFETY INTERFERENCE

The City of New York urges the FCC to pursue a "zero tolerance" approach to interference on the 800 MHz public safety band. The City broadly agrees with the FCC's assessment that such interference is primarily caused by multiple cell sites, emitting strong Commercial Mobile Radio Service ("CMRS") signals, which "overwhelm" the weaker public safety signals emitted from more distant towers.¹¹ This phenomenon appears to be mainly attributable to the fact that CMRS systems operate on frequencies on adjacent channels, or in adjacent bands, to public safety frequencies.¹² Moreover, to the extent that Business and Industrial/Land Transportation users adopt similar digital technologies, more severe interference could result. Consequently, the City believes that any satisfactory, long-term solution to the public safety interference problem must

⁹ EMS supervisors are also equipped for vehicle-to-vehicle data communications, and have access to statistical and historical data from the CAD system.

¹⁰ This system can also be used to coordinate activities during special events. Other EMS-related user groups include Telemetry Control and the Volunteer Ambulance Corps. Secondary users include FDNY support services and administration.

¹¹ See *Improving Public Safety in 800 MHz Notice*, paras. 14-15, citing *Project 39, Interference to Public Safety 800 MHz Radio Systems, Interim Report to the FCC*, Dec. 24, 2001 and *Avoiding Interference Between Public Safety Wireless Communications and Commercial Wireless Communications Systems at 800 MHz – A Best Practices Guide*, (*Best Practices Guide*), December, 2000.

¹² See *Id.*

include a reconfiguration of the 800 MHz channel allocations to create a contiguous public safety band and eliminate the interleaving of frequencies.¹³

The causes of New York City's 800 MHz interference problems, while subject to ongoing assessment, appear to be consistent with the above scenario. The City operates an analog system in the frequency range where public safety interference has been found to be most prevalent. Additionally, with the influx of new non-public safety users during the last ten years¹⁴, the "noise floor"¹⁵ has increased greatly throughout the City. The increased noise floor has been observed to overload front-end receivers, and desensitize the hand-held portable radios that are the "lifeline" of public safety personnel in the field. The City's interference problem is bound to grow as non-public safety users increasingly employ a variety of digital transmission technologies. Since September 11, non-public safety users have applied for new licenses in New York City, with the goal of expanding their radio and cellular communications coverage in the 800 MHz frequency bandwidth. Unfortunately, the end result will likely be increased interference to public safety users.

While creating a contiguous block of public safety spectrum should substantially reduce interference from CMRS licensees, this measure alone is unlikely to resolve fully the interference problem. Therefore, it is likely that additional, "complementary" solutions must also be used, including new radios with greater resistance to adjacent channel interference.¹⁶ Regarding such complementary solutions, however, the burden of implementing new radio designs, of altering spectrum use¹⁷ and of other changes must

¹³ The City also urges the FCC to consider adopting a uniform digital standard across the 800 MHz spectrum.

¹⁴ By, for example, private car services, limousines, utilities and cellular phone carriers.

¹⁵ For purposes of these comments, "noise floor" includes interference generated by CMRS or other locally mounted commercial antennas.

¹⁶ See *Improving Public Safety in 800 MHz Notice*, para. 73, citing *Best Practices Guide*.

¹⁷ See *Improving Public Safety in 800 MHz Notice*, para. 76.

not unduly fall on public safety licensees. Thus, for example, while New York City recognizes the benefits of making public safety radio equipment more resistant to interference, and of increasing public safety signal strength in certain areas, such initiatives must not result in placing unfunded mandates on public safety licensees. Indeed, CMRS carriers (and other generators of interference) should in the first instance restrict out-of-band emissions¹⁸ and reduce signal strength¹⁹ wherever feasible.

Finally, New York City is concerned about the prospect of the current frequency coordination system, or of newly certified "super coordinators," overseeing the restructuring and efficient use of a reconfigured 800 MHz radio frequency spectrum.²⁰ As a practical matter, public safety licensees have sometimes found themselves at a disadvantage in "competing" with private entities in securing their spectrum rights before private frequency coordinators. Thus, the entire process should to the greatest extent possible be removed from even the appearance of subjective analysis and activity. To ensure that public safety frequency coordination is undertaken in a manner that best reflects national security priorities and local public safety needs, the City believes the FCC should weigh consolidating public safety coordination under a governmental administrative framework. Government administrators could act as objective third-party frequency coordinators, with the benefit of access to government safety plans and priorities.

IV. FULLY FUNDING RELOCATION AND ASSOCIATED COSTS

¹⁸ *Id.*, para. 75.

¹⁹ *Id.*, para. 77.

²⁰ *Id.*, paras. 68-72.

It is most critical to New York City that the federal government not mandate realignment of 800 MHz public safety spectrum, or impose any complementary solutions, without first identifying external funding sources to cover the full costs of public safety implementation.²¹ Nor should public safety users be required to undertake implementation ahead of receiving funding for such total costs. The City simply cannot bear the costs associated with new 800 MHz mandates. Due to the national economic downturn, and the severe local economic impact of September 11, the City faces nearly a \$5 billion budget shortfall next year.²² The City and other municipalities must not, due to their particular fiscal circumstances, be prevented from making use of spectrum specifically set aside by the federal government for vital public safety use.²³

In fact, New York City could face tremendous new costs under any of the proposals set for in the NPRM. The magnitude of such costs largely depends on whether or not the City would be required to relocate to new frequencies in the 800 MHz spectrum. This might ultimately be necessary under the Nextel proposal, and would certainly be required under both the NAM proposal and that set forth in paragraph 26 of the NPRM. If relocation is required, preliminary estimates suggest that the cost to the City could readily exceed \$100 million. (This estimate excludes the potential costs associated with

²¹ Such sources could include direct federal funding, federal bond issues, proceeds from spectrum auctions and/or “contribution” from CMRS and other commercial users of adjacent frequencies.

²² See *Executive Budget, City of New York, 2003* (rel. Apr. 17, 2002).

²³ The interference problems faced by public safety licensees result from a variety of factors not of their making, and, accordingly, the cost of providing solutions must not now be “internalized” by local public safety entities. Even assuming, arguendo, that some portion of the remedial costs was to fall on the injured parties, i.e., public safety licensees, it must be noted that New York City (and, likely, most other municipalities) face major procedural and legal obstacles both in securing funding, and in procuring the services of consultants. City “advocates” would, for example, need to persuade a host of decision-makers to earmark sufficient funding, in the “required” timeframe, for inclusion in the City’s already overburdened 10-year Capital Plan (where competition is intense for the funding of other critical public safety-related projects).

any complementary solutions, and assumes that FCC frequency licenses would not have to be "repurchased.")²⁴

The main cost element would be associated with reprogramming, retuning and/or replacing the affected equipment, including portable and mobile radios, data terminals, central stations, transmitters, receivers, receiver multicouplers, radio network controllers, data base stations and antenna systems. Determinations on how to proceed with respect to reprogramming, retuning and/or replacement would have to be made on a case-by-case basis, depending on the particular relocation plan and the affected equipment. In the case of radios, for example, New York City would need to determine the relative feasibility and cost effectiveness of reprogramming existing radios versus purchasing new ones (or, alternatively, of purchasing some new radios to use as a "transition set" while existing radios were reprogrammed one group at a time).²⁵

The second most expensive category of cost would likely be associated with engineering studies. New York City would, at a minimum, need to design a system to transition users from their current to their "replacement" spectrum without disrupting service; conduct a radio spectrum analysis of the proposed new service area to determine whether or not migration could be accomplished without diminishing the range, and quality, of service; and conduct a site survey to determine whether antennas and other equipment would have to be relocated. Associated costs would also include hiring consultants to assist in the engineering studies, and securing (i.e., renting) adequate new siting facilities. In the case

²⁴ For example, Nextel recommends that all future 800 MHz public safety equipment be reengineered to include greater interference rejection. *See Nextel Proposal* at 32-33.

²⁵ Certain non-City agency users may also need to replace radios because they subscribe to OEM's ALERT network.

of the City's public safety data systems, concurrent systems must be installed to mitigate any risk of downtime.²⁶

Finally, the administrative expenses associated with such activities as developing an implementation plan, and educating all New York City users of the changes in 800 MHz service would not, by any measure, be immaterial. Along these lines, and for obvious reasons, the City is compelled to clearly state that any eventual spectrum "swap" or realignment must not risk disrupting public safety communications. Thus, for example, public safety licensees should not be forced to relocate, or undertake complementary solutions, on a timeframe that by placing unreasonable operational, logistical or timing constraints on first responder agencies ultimately puts public safety at risk.

V. CONCLUSION

In this post-September 11 world, with expanded security and public safety needs, the interference being experienced by public safety systems is an increasing and extremely dangerous problem. Resolution of the questions raised in the NPRM could have a profound public safety and economic impact on the country. As a result, New York City does not believe deliberations should be rushed. The City also recognizes that, depending on the final resolution, implementation could itself take several years. At the same time, however, the City is hopeful that an acceptable solution can be arrived at and implemented without undue delay. Finally, as a means of addressing this problem in the interim, the City urges the FCC to consider imposing a temporary moratorium on issuing additional commercial licenses in the 800 MHz frequency. This would immediately

²⁶ This assumes that ambulances, for example, have sufficient space to run "side-by-side" data terminals.

benefit public safety, and could mitigate the potential complications associated with implementing any future 800 MHz plan.

Respectfully submitted,

/s/

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